

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)
2. (previously presented) The laser submount of claim 17, wherein the substrate is selected from the group consisting of silicon, quartz, sodium borosilicate glass, sapphire, gallium arsenide, silicon carbide, and gallium phosphide.
3. (previously presented) The laser submount of claim 17, further comprising:
an interconnect above the planarization layer.
4. (previously presented) The laser submount of claim 3, wherein the planarization layer comprises an oxide layer.
5. (previously presented) The laser submount of claim 3, wherein the top layer comprises a dielectric layer covering the interconnect, the laser submount further comprising:
a contact pad dielectric layer to electrically connect the laser to a contact pad.
6. (previously presented) The laser submount of claim 5, further comprising:
a sealing ring above the dielectric layer and surrounding the contact pad and the laser.
7. (previously presented) The laser submount of claim 17, further comprising:

at least one of a passive integrated circuit and an active integrated circuit.

8-16. (canceled)

17. (currently amended) A laser submount to mount a laser, the laser submount comprising:

a substrate;

a planarization layer on the substrate;

a top layer on the planarization layer, the top layer defining a laser mounting surface to directly mount the laser in physical contact with the top layer ~~wherein the laser is mounted on the top layer;~~

an alignment post coupled to the substrate opposite the planarization layer; and

a lens on the substrate between the substrate and the planarization layer, the lens to receive light from the laser, through the planarization layer and the top layer, and to direct the light through the substrate into the alignment post opposite the planarization layer and the top layer, wherein the lens comprises a surface to provide at least one focal length to focus the light near an end of the alignment post, and wherein the substrate, the planarization layer, and the top layer are transparent to the light.

18. (previously presented) The laser submount of claim 17 wherein the lens comprises a bifocal diffractive lens comprising a surface with ridges to provide two focal lengths.

19. (previously presented) The laser submount of claim 17 wherein the lens comprises a hybrid diffractive/refractive element comprising a surface with a curvature to provide one focal length.

20. (previously presented) The laser submount of claim 17 wherein the alignment post comprises a hollow cylinder.

21. (previously presented) The laser submount of claim 17 wherein the alignment post comprises a solid, transparent cylinder.
22. (previously presented) The laser submount of claim 17 wherein an alignment feature on the alignment post comprises an outer diameter of the alignment post.
23. (previously presented) The laser submount of claim 17 wherein the alignment post comprises a transparent partial sphere.
24. (previously presented) The laser submount of claim 17 wherein the substrate comprises a silicon wafer of a thickness of 675 microns that is transparent to 1310 nanometer light.
25. (previously presented) The laser submount of claim 3, further comprising:
a plug to electrically connect the interconnect and a contact pad.
26. (previously presented) The laser submount of claim 25, further comprising:
a sealing ring above the dielectric layer and surrounding the contact pad and the laser;
a second contact pad above the dielectric layer and outside of the sealing ring; and
a second plug to electrically connect the interconnect and the second contact pad.
27. (currently amended) A laser submount to mount a laser, the laser submount comprising:
a substrate;
a planarization layer on the substrate;
a top layer on the planarization layer, the top layer defining a laser mounting surface to directly mount the laser in physical contact with the top layer~~wherein the laser is mounted on the top layer~~;
a cylindrical alignment post coupled to the substrate opposite the planarization layer; and

a lens on the substrate between the substrate and the planarization layer, the lens to receive light from the laser, through the planarization layer and the top layer, and to direct the light through the substrate into the cylindrical alignment post, wherein the lens comprises a surface to provide a focal length to focus the light near an end of the cylindrical alignment post.

28. (previously presented) The laser submount of claim 27, wherein the cylindrical alignment post comprises a hollow cylinder.

29. (previously presented) The laser submount of claim 27, wherein the cylindrical alignment post comprises a solid, transparent cylinder.

30. (previously presented) A laser submount to mount a laser, the laser submount comprising:

- a substrate;

- a planarization layer on the substrate;

- a top layer on the planarization layer to mount the laser;

- a partial spherical alignment feature coupled to the substrate opposite the planarization layer; and

- a lens on the substrate between the substrate and the planarization layer, the lens to receive light from the laser, through the planarization layer and the top layer, and to direct the light through the substrate into the partial spherical alignment feature, wherein the lens comprises a surface to provide a focal length to focus the light near an end of the partial spherical alignment feature.